QUIKLINK™ PRIVATE WIRE

TWO-WAY AUTOMATIC RINGDOWN UNIT

Small, Inexpensive and Installs with Modular Cords

FEATURES

- Instant off-hook ringdown access between two telsets or equivalent devices. May be installed anywhere in circuit within loop resistance limits. Also works with computer modems and fax machines.
- LED off-hook indication and multiple user-selectable ringing cadences.
- Contains ringing and filtered talk-battery sources; operates from either d.c. or a simple a.c. wall adapter.
- Long-line model (to 1,500 Ω loop resistance) and economy short-line models.
- Available in three versions (Economy, Standard, Long-line) to cover every requirement.

APPLICATIONS

Security
- Elevator phones
- Guardpost hotlines
- Door entry phones in offices, homes, apartments

Offices
- Instant tielines between phones, PABXs and Key Systems
- Off-premise extensions over single pair with standard telsets and bridged ringing

Telecom Installation and Repair
- Ring down cable pair under test to signal connected equipment
- Use with standard telset or “butt set”
- Test ringing, answering and signal-path functions of any telecom device at customer premise
- Field expedient order wire with standard telsets or “butt sets”

Hospitals, Factories, Police and Fire Stations
- Emergency hotlines

Sales
- Central Office line simulator for equipment demos at trade shows, point-of-sale, or customer premise

Production Testing, Repair and Design
- Test ringing, answering and signal-path functions of any telecom device
- Simple low-cost CO line simulator eliminates tying up working lines
- Instantly generates call—saves time dialing numbers

Banks
- On-premise ATM and customer enquiry hotlines

OEM Applications
- Configurable for direct pcb mounting

Size and Weight
- Weighs just 6 ounces
- Only 5/8 x 4-1/4 x 2-1/2 inches in size

CAMBRIDGE ELECTRONICS LABORATORIES
20 Chester Street, Somerville MA 02144-3005 USA • Tel: + 1 617 629-2805 • Fax: + 1 617 623-1882 camblab@attglobal.net • www.camblab.com

SPECIFICATIONS

	ECONOMY	STANDARD	LONG-LINE
Power Input	12 Vac at 700 mA max	12 Vac at 700 mA max 20–28 Vdc at 300 mA max	12 Vac at 1000 mA max 42–56 Vdc at 250 mA max
Talking Power	24 Vdc at 50 mA	24 Vdc at 50 mA	48 Vdc at 50 mA
Line Feed Type	Two-wire unbalanced		Two-wire balanced referenced to +Vin
Maximum Loop Resistance	600 Ω (23 mA)	600 Ω (23 mA)	1,500 Ω (23 mA)
Ringing Power (nominal)	70 V 20 Hz modified square wave	70 V 20 Hz modified square wave	86 V 20 Hz sine wave
Ringing Cadence	1 sec on 1 sec off	Selectable: continuous ring; 1 on 1 off; 2 on 2 off; 2 on 4 off	
Off-hook Indicator	None	LED	LED
Protection	Tip-ring Zener-clamped at 120 V suitable for on-premise applications; for off-premise use install separately-available protection module.		
Size and Weight	6 ounces (170 grams) 5/8 x 4-1/4 x 2-1/2 inches (16 x 108 x 64 mm)		
Mounting	Any position; secure with double-sided tape or utilize two holes which are threaded for 8–32 screws and freely pass 6–32 screws. Multiple units may be stacked using mounting holes and long screws to economize on required space.		
Housing	Monolithically encapsulated in UL 94V-0 flame-resistant epoxy resin		
Termination	4–40 screws	4–40 screws RJ-11 jack	4–40 screws RJ-11 jack
Operating Environment	14 to 140˚ F (-10 to 60˚ C)		

CAMBRIDGE ELECTRONICS LABORATORIES
20 Chester Street, Somerville MA 02144–3005 USA
Tel: + 1 617 629–2805 • Fax: + 1 617 623–1882
camblab@attglobal.net • www.camblab.com

Copyright © 2000 by Cambridge Electronics Laboratories

Warranty

Manufacturer warrants its products to be free of failure for a period of one year from date of shipment. Any unit returned within this one-year period will be repaired or replaced free of charge unless Manufacturer determines that the failure occurred due to improper installation, physical damage, or operation outside of specified limits. This warranty is in lieu of all other warranties implied or expressed. Manufacturer shall not be liable for operation delays or consequent damages of any type.

USER GUIDE

Quiklink[tm] *Private Wire*
Two-way Automatic Ringdown Module

Features

Instant off-hook access between two telsets or equivalent devices; install anywhere in circuit within loop resistance limits. Also supports modems and facsimile or answering machines; CPC disconnect signal provided.

LED off-hook indication and multiple user-selectable ringing cadences.

Contains ringing and filtered talk-battery sources: operate from either dc or a simple ac wall adapter.

Long-line model (to 1,500 Ω loop resistance) and both Standard and Economy short-line models.

Mechanical installation--surface mounting

Mount unit in any position with any of three methods:

- Double-sided tape on front or rear.
- Two 8-32 screws into internal threads.
- Two 6-32 (or smaller) screws, free through mounting holes and secured by nuts, or two wood screws; this option also allows stacking units to conserve space.

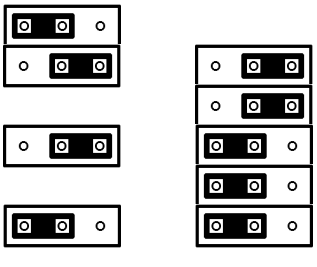
Electrical installation--pcb mount

The *Quiklink*[tm] *Private Wire* may be mounted to a printed circuit board, e.g. in OEM applications, by using the threaded holes described above for mechanical mounting and the provided through-holes, paralleled to the screw terminals, for electrical connections via header pins rising from the motherboard. Refer to the drawing at right for locations of the through-holes corresponding to the power and telset connections.

Cadence selection

For Standard and Long-line models select the desired ringing cadence by positioning the shunts on headers J1 and J2 as shown in the following illustration.

On/off seconds	J1	J2
Continuous		
1/1		
2/2		
2/4		
4/8		
Disable		



\SHUNT_.PIX \SHUNT.PIX

Electrical installation--power

Power the economy model from 12 Vac by connecting a wall adapter rated at 700 mA to the two screw terminals marked ~12 Vac~.

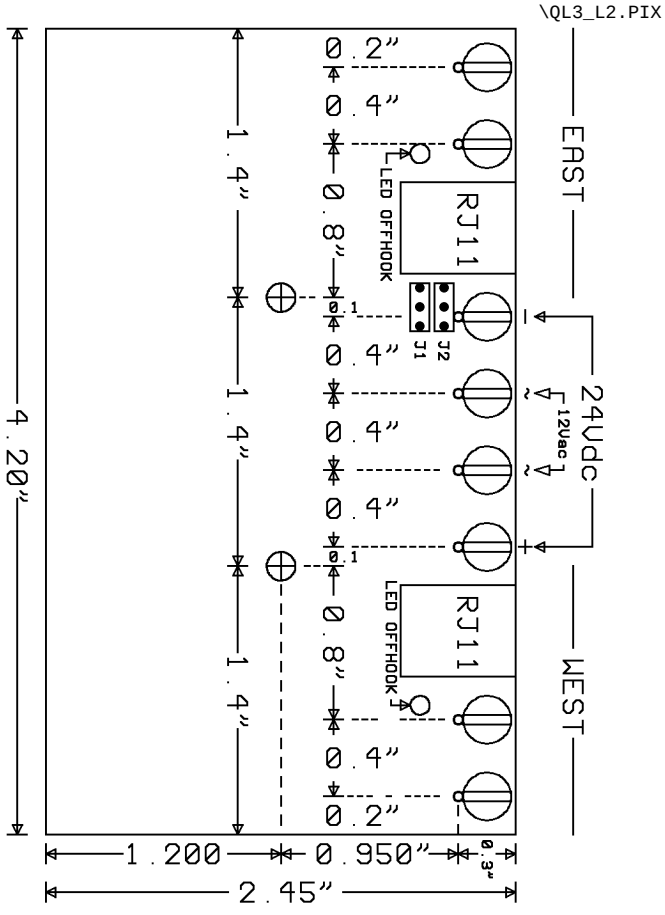
Standard and Long-line models may be powered from 12 Vac as above, or from dc by connecting the appropriate dc supply to the marked screw terminals; observe proper polarity. For temporary field use (sales demonstrations, order wire, cable testing) power Standard unit from three 9 V batteries snapped together in series.

For use with off-premise line, strap the positive dc lead to earth ground to prevent electrolytic corrosion of the copper pair.

Electrical installation--telset

Connect East and West telsets or equivalent devices to the respective Tip/Ring screw terminals or RJ-11 jacks. (Economy model provides screw terminals only.)

Unit is internally protected with Zener diodes sufficient for on-premise applications. For each off-premise telset install one Cambridge Electronics Laboratories *Off-Premise Multi-Protector*, incorporating both gas-tube and PTC technology against lightning strikes, ac induction and power-line crosses. (Protector must be earth-grounded.)



Use outside North America

North American standard ringing utilizes a 20 Hz signal which may not operate ringers in some other countries especially Germany, which requires 25 Hz or above. Units with custom ringing voltages and frequencies for use outside North America are available at standard prices.

Use with devices expecting dial tone

An automatic ringdown device generates no dial tone because it requires no dial string. However modems or modem-like devices may in some cases require dial tone before executing some function. Such devices may be configured to operate with the Quiklink by enabling "blind dial" with the initialization string ATX0. Consult user manual for the device in question.

Functions

1. When a device connected to either port goes off hook, send ringing voltage to the device connected to the other port. These devices may be ordinary telsets, cordless phones, the trunk ports of PABXs or Key Systems, or other equivalent devices such as fax, modem, ACD, or telephone interface module of a central dictating system. When the called port answers, latch ringing off and cut the calling port through to the called port.

2. During ringing provide ringback tone to the calling port.

3. When either port returns to on-hook status, send CPC signal (interruption of loop current for ~500 milliseconds) to opposite port without restarting ringing.

4. Provide hook-status indication of each port via LED (Standard and Long-line models only).

Specifications

Power input	12 Vac at 700 mA max	(all models)
in addition	20-28 Vdc at 300 mA max	(Standard model)
	42-56 Vdc at 250 mA max	(Long-line model)
Talking power	24 Vdc at 50 mA	(Standard model)
	48 Vdc at 50 mA	(Long-line model)
Line feed type	Two-wire unbalanced	(Economy and Standard models)
	Two-wire balanced referenced to +Vin	(Long-line model)
Maximum loop resistance	600 Ω	(Economy and Standard models)
	1,500 Ω	(Long-line model)

Ringing power	70 V 20 Hz modified square wave	(Economy and Standard models)
	86 V 20 Hz sine wave	(Long-line model)
Ringing cadence	Fixed: 1 sec on/1 sec off	(Economy model)
	Option: Continuous	(Standard and Long-line Models)
	Option: 1 sec on/1 sec off	(Standard and Long-line Models)
	Option: 2 sec on/2 sec off	(Standard and Long-line Models)
	Option: 2 sec on/4 sec off	(Standard and Long-line Models)
Hook-status indicator	LED	(Standard and Long-line models)
Protection	Tip-Ring Zener-clamped for on-premise applications. For each off-premise telset install one Cambridge Electronics Laboratories *Off-Premise Multi-Protector*.	
Size	5/8 x 4-1/4 x 2-1/2" (16 x 108 x 64 mm)	
Weight	Six ounces (170 grams)	
Housing	Monolithically encapsulated in UL 94V-0 flame-resistant epoxy resin	
Termination	4-40 screws	(all models)
	RJ-11 jacks	(Standard and Long-line models)
Operating environment	14 to 140° F (-10 to 60° C)	

Warranty

Manufacturer warrants its products to be free of failure for a period of one year from date of shipment. Any unit returned within this one-year period will be repaired or replaced free of charge unless Manufacturer determines that the failure occurred due to improper installation, physical damage, or operation outside of specified limits. This warranty is in lieu of all other warranties implied or expressed. Manufacturer shall not be liable for operation delays or consequent damages of any type. 08/00

CAMBRIDGE ELECTRONICS LABORATORIES
Twenty Chester Street
Somerville, Massachusetts 02144-3005 USA

Telephone +1 617 629-2805 Telefax +1 617 623-1882
camblab@attglobal.net www.camblab.com

Copyright © 2000 by Cambridge Electronics Laboratories